

IN THE CLAIMS:

1. (Currently Amended; Allowable) ~~An electric conductivity~~ An electrically conductive beam used for separating and extracting a minute micro-sample from a specimen substrate in vacuum space, said beam comprising:

a plurality of branch beams having an electric conductivity ~~formed~~ at a tip of said beam;

wherein said branch beams are separated from each other by a distance which is smaller than a thickness of a minute micro-sample to be held between said branch beams when said beam is moved in the direction of the minute micro-sample, and said branch beams being forcibly spread by the minute micro-sample so that the minute micro-sample is held by a resiliency force of said branch beams.

2. (Currently Amended; Allowable) ~~An electric conductivity~~ An electrically conductive beam according to claim 1; ~~claim 1~~;

wherein ~~the minute micro-sample held between said branch beams is put placeable on a sample holder for storing the micro-sample and~~ said sample holder and said beam are ~~moved~~ moveable relative to one another so that the minute micro-sample held between said branch beams is ~~removed~~ removeable from said branch beams ~~as the minute micro-sample~~ by being trapped by a part of said sample holder.

3. (Currently Amended; Allowable) An equipment for specimen fabrication, comprising:

a stage for mounting a specimen thereon;

a microscope for ~~specifying~~ monitoring a position ~~to cut~~ where a minute micro-sample is to be cut out from the specimen and for monitoring operations of cutout of the minute micro-sample from the specimen;

a sample hold system having ~~an electric conductivity~~ an electrically conductive beam, at a top of which a plurality of branch beams having an electric conductivity are formed; and

a control system for controlling the position and rotation of said beam;

wherein said branch beams are separated from each other by a distance which is smaller than a thickness of the minute micro-sample to be held between said branch beams when said beam is moved in the direction of the minute micro-sample, and said branch beams being forcibly spread by the minute micro-sample so that the minute micro-sample is held by a resiliency force of said branch beams.

4. (Currently Amended; Allowable) An equipment for specimen fabrication, comprising:

a stage for mounting a specimen thereon;

a microscope for ~~specifying~~ monitoring a position ~~to cut~~ where a minute micro-sample is to be cut out from the specimen and for monitoring operations of cutout of the minute micro-sample from the specimen;

a sample hold system having ~~an electric conductivity~~ an electrically conductive beam, at a top of which a plurality of branch beams having an electric conductivity are formed;

a detector for detecting that the top of said branch beams has come into contact with the minute micro-sample which is cut out from the specimen; and

a driver for moving the beam in the direction of the stage in a predetermined amount based on the signal from the detector according to the detection of contact of the top of said branch beams and the minute micro-sample;

wherein said branch beams are separated from each other by a distance which is smaller than a thickness of the minute micro-sample to be held between said branch beams when said beam is moved in the direction of the minute micro-sample, and said branch beams being forcibly spread by the minute micro-sample so that the minute micro-sample is held by a resiliency force of said branch beams.

5. (Currently Amended; Allowable) The equipment for specimen fabrication according to claim 3; ~~claim 3~~;

wherein said microscope is at least one of an optical microscope, a scanning electron microscope, and a scanning ion microscope.

6. (Currently Amended; Allowable) A method for specimen fabrication, comprising:

mounting a specimen on a stage;

cutting a minute micro-sample from said specimen;

contacting a top of electric conductivity branch beams which are formed at a top of ~~an electric conductivity~~ an electrically conductive beam to a part of the minute micro-sample cutout from the specimen;

detecting that the top of said branch beams has come into contact with the minute micro-sample;

moving the beam in the direction of the stage in a predetermined amount ~~based on the signal from the detector according to the~~ after detection of contact of the top of said branch beams and the minute micro-sample; and

moving the beam in the reverse direction to the stage after the minute micro-sample is held by a resiliency force of said branch beams;

wherein said branch beams are separated from each other by a distance which is smaller than a thickness of the minute micro-sample to be held between said branch beams when said beam is moved in the direction of the minute micro-sample and said branch beams being forcibly spread by the minute micro-sample so that the minute micro-sample is held by the resiliency force of said branch beams.

7. (Currently Amended; Allowable) The method for specimen fabrication according to claim 6, comprising:

~~transferring the minute micro-sample held by said branch beams onto a sample holder for mounting the minute micro-sample thereon;~~

~~storing the minute micro-sample on the sample holder; and~~

moving said sample holder and said beam relative to one another so that the minute micro-sample held between said branch beams is removed from said branch beams ~~and the minute micro-sample~~ by being trapped by a part of said sample holder, so as to transfer the minute micro-sample to the sample holder.

8. (Currently Amended; Allowable) A method for specimen fabrication, comprising:

mounting a specimen substrate on a stage;

cutting a minute micro-sample from said specimen substrate;
holding the minute micro-sample at the top of electric conductivity branch
beams which are formed at a top of ~~an electric conductivity beams~~ an electrically
conductive beam;

extracting the minute micro-sample held by a restoring force of said branch
beams from the specimen substrate;

processing an extracted minute micro-sample by an irradiation with a charged
beam; and

storing a processed minute micro-sample on a mounting holder on the
specimen stage.

9. and 10. (Cancelled without prejudice or disclaimer of any scope or subject
matter)

11. (Currently Amended; Allowable) The equipment for specimen fabrication
according to claim 4:

wherein said microscope is ~~any~~ at least one of an optical microscope, a
scanning electron microscope, and a scanning ion microscope.

12. (Currently Amended; Allowable) ~~An electric conductivity~~ An electrically
conductive beam ~~used for separating and extracting a minute micro-sample from a
specimen substrate in vacuum space according to claim 1; claim 1;~~

wherein said plurality of branch beams are formed at a tip of said beam by cutting the tip of said beam so that a deep cut is formed between said plurality of branch beams.

13. (Currently Amended; Allowable) ~~An electric conductivity~~ An electrically conductive beam used for separating and extracting a minute micro sample from a specimen substrate in vacuum space according to claim 1; ~~claim 1~~;

wherein said beam is held by a metal beam which has a diameter larger than that of said beam₁ and said metal beam is held by a detachable holder which has a diameter larger than that of said metal beam₁ so that said beam can be held to or removed from said detachable holder.

14. (Currently Amended; Allowable) ~~An electric conductivity~~ An electrically conductive beam used for separating and extracting a minute micro sample from a specimen substrate in vacuum space according to claim 2; ~~claim 2~~;

wherein said plurality of branch beams are formed at a tip of said beam by cutting the tip of said beam so that a deep cut is formed between said plurality of branch beams.

15. (Currently Amended; Allowable) ~~An electric conductivity~~ An electrically conductive beam used for separating and extracting a minute micro sample from a specimen substrate in vacuum space according to claim 2; ~~claim 2~~;

wherein said beam is held by a metal beam which has a diameter larger than that of said beam₁ and said metal beam is held by a detachable holder which has a

diameter larger than that of said metal beam₁ so that said beam can be held to or removed from said detachable holder.

16. (Currently Amended; Allowable) ~~An electric conductivity~~ An electrically conductive beam ~~used for separating and extracting a minute micro-sample from a specimen substrate in vacuum space~~ according to claim 1; ~~claim 1~~;

wherein said plurality of branch beams are formed at a tip of said beam by cutting the tip of said beam so that two deep cuts are formed crossed with each other between said plurality of branch beams₁ and each width of said two deep cuts are different.

17. (Currently Amended; Allowable) ~~An electric conductivity~~ An electrically conductive beam ~~used for separating and extracting a minute micro-sample from a specimen substrate in vacuum space~~ according to claim 2; ~~claim 2~~;

wherein said plurality of branch beams are formed at a tip of said beam by cutting the tip of said beam so that two deep cuts are formed crossed with each other between said plurality of branch beams₁ and each width of said two deep cuts are different.

18. (Currently Amended; Allowable) ~~An electric conductivity~~ An electrically conductive beam ~~used for separating and extracting a minute micro-sample from a specimen substrate in vacuum space~~ according to claim 12; ~~claim 12~~;

wherein the thickness of said minute micro-sample is taken into account in real-time in setting a width of said deep cut₁ so that said branch beams are

separated from each other by the distance which is smaller than the thickness of said minute micro-sample.

19. (Currently Amended; Allowable) ~~An electric conductivity~~ An electrically conductive beam ~~used for separating and extracting a minute micro sample from a specimen substrate in vacuum space~~ according to claim 14; ~~claim 14~~;

wherein the thickness of said minute micro-sample is taken into account in real-time in setting a width of said deep cut, so that said branch beams are separated from each other by the distance which is smaller than the thickness of said minute micro-sample.

20. (Currently Amended; Allowable) ~~An electric conductivity~~ An electrically conductive beam ~~used for separating and extracting a minute micro sample from a specimen substrate in vacuum space~~ according to claim 16; ~~claim 16~~;

wherein the thickness of said minute micro-sample is taken into account in real-time in setting a width of at least one deep cut of said two deep cuts, so that said branch beams are separated from each other by the distance which is smaller than the thickness of said minute micro-sample.

21. (Currently Amended; Allowable) ~~An electric conductivity~~ An electrically conductive beam ~~used for separating and extracting a minute micro sample from a specimen substrate in vacuum space~~ according to claim 17; ~~claim 17~~;

wherein the thickness of said minute micro-sample is taken into account in real-time in setting a width of at least one deep cut of said two deep cuts, so that

said branch beams are separated from each other by the distance which is smaller than the thickness of said minute micro-sample.